Koviloor Academy

New and Revised Edition

THE

HEALTH ORGANISATION

OF THE

LEAGUE OF NATIONS

IMS0738

124

Information Section,
League of Nations Secretariat,
GENEVA.

6 d. 15 cents.

Koviloor Acadamy

New and Revised Edition

THE

HEALTH ORGANISATION

OF THE

LEAGUE OF NATIONS

Presented by S. Murugappa

23-10-52.

[illegible]
[illegible]
[illegible]

Information Section,
League of Nations Secretariat,
GENEVA.

Koviloor Acadamy

NOTE

This pamphlet is one of a short series issued by the Information Section of the Secretariat of the League of Nations on various aspects of League work. It should not be regarded as an official statement engaging the responsibility of the League : for official purposes, reference should be made to the documents and to the official proceedings of the League of Nations.

Other pamphlets deal with the general story of the League, constitution and organisation of the League, the Permanent Court of International Justice, the Austrian reconstruction scheme, political activities, the Upper Silesian settlement, financial and economic work, financial organisation and allocation of expenses, disarmament, mandates, transit, minorities, administration of Danzig and the Saar, intellectual co-operation, and humanitarian activities.

January 1926.

Koviloor Acadamy

CONTENTS

	Page
GENERAL	5
HISTORY OF THE HEALTH ORGANISATION	6
PRESENT CONSTITUTION AND AFFILIATIONS OF THE HEALTH ORGANISATION	7
1. *Advisory Council*	8
2. *Health Committee and its Commissions*	8
3. *Secretariat*	9
4. *Other Forms of Co-operation*	10
THE WORK OF THE HEALTH ORGANISATION	10
1 *Intelligence Work and Administrative Co-ordination*	11
(a) Epidemiological Intelligence	11
(b) Information regarding Medical Statistics and the Organisation of Health Services	14
(c) Collaboration of Vital Statisticians	16
(d) Interchanges of Public Health Personnel and Individual Fellowships	16
2. *Co-ordination of Scientific Researches*	19
(a) Therapeutic Sera	19
(b) Sero-reactions of Syphilis	22
(c) Biological Products	23
3. *Securing Joint Action in the Combating of Disease*	27
(a) Work of Epidemic Commission	27
(b) Warsaw Health Conference	31
4. *The Health Organisation and International Sanitary Conventions*	35
(a) International Sanitary Convention of 1912	35
(b) Quarantine Formalities	36
(c) Inland Waterways	37

Koviloor Acadamy

Page

5. *Enquiries and Investigations.* 38
(a) Enquiry in Far Eastern Ports. 38
(b) Cancer Enquiry. 40
(c) Enquiry into Diseases in Tropical Africa 41
(d) Combating Malaria 42
(e) Opium and Dangerous Drugs. 45
(f) Tuberculosis Enquiry. 45
(g) Public Health Instruction. 47
(h) Miscellaneous Enquiries 47

Koviloor Acadamy

THE HEALTH ORGANISATION OF THE LEAGUE OF NATIONS

GENERAL

The League of Nations is an association of States that have accepted certain international obligations with the object of preserving peace and have undertaken to co-operate in matters of international concern by their signature of the Covenant of the League.

The League Health Organisation is a special application in the field of health questions of this whole systematic attempt to organise international relations. In the domain of public health, as elsewhere, the war lowered standards, relaxed efforts, and at the same time made the need for continuous international action more urgent; and the obligations and machinery brought into existence by the Covenant, here, as in other directions, were evolved so as to meet real needs in a commonsense way. The scale of the Health Organisation's work is necessarily limited by the amount of money and attention Governments and public opinion can spare for such matters under existing political conditions.

The co-operative effort of which the League is the expression is essentially tentative, and no rigid formulæ have governed its evolution. Nowhere has this been more obvious than in the growth of the Health Organisation, which has been built up step by step as the nature of the work to be done has become clear and pressing.

Koviloor Acadamy

H STORY OF THE HEALTH ORGANISATION

The League Council, at its second meeting in February 1920, decided to summon an International Conference of health experts to draw up the constitution of the Health Organisation under Article 23, paragraph (*f*), of the Covenant, which declares that the Members of the League shall "take steps in matters of international concern for the prevention and control of disease". When the Conference met in April 1920 it was faced with the menace of the typhus and relapsing fever epidemics in Eastern Europe, which, originating in Russia, had spread into the eastern marches of Poland. To meet this menace it recommended the appointment of a temporary Epidemic Commission to work with the Health Administrations in East Europe. This recommendation was carried out by the Council at its Rome meeting in May 1920.

The Conference also drew up a draft constitution for the Health Organisation, which was accepted by the First Assembly in November 1920. This draft would have made the already existing Office international d'hygiène publique the basis of the new League Health Organisation.

The First Assembly wished to model the Health Organisation on the general plan of the League itself, that is, with a conference (corresponding to the Assembly; in this case the conference would have been the Office international, but with enlarged membership and wider powers), an executive committee (corresponding to the Council) elected by the conference, and a secretariat, which would form a section of the Secretariat-General. But the United States, which is a member of the Office international, opposed this solution, with the result that the constitution of the Health Organisation was postponed for a time.

Koviloor Acadamy

Meanwhile in June 1921, the League Council had appointed a provisional Health Committee many of whose members were on the Committee of the Office international d'hygiène publique. This enabled the League Health Committee to co-operate with the Office international, the latter body to some extent fulfilling the functions of a general conference, as it has a membership of thirty-odd States and meets twice a year.

A further step in the development of the Health Organisation was taken by the Third Assembly (September 1922), which passed a resolution declaring its desire to see the League Health Organisation put upon a permanent basis with a constitution, that would prevent overlapping with other institutions created for similar purposes. Thereupon the Council, at its meeting in January 1923, decided to invite the members of the Health Committee and the Office international d'hygiène publique to form a Mixed Committee in order to prepare for the Fourth Assembly a draft constitution for the Health Organisation designed to satisfy the requirements of the Third Assembly. The Committee met at Paris in May 1923 and drew up a report which was subsequently adopted by the Fourth Assembly and by the Office international.

PRESENT CONSTITUTION AND AFFILIATIONS OF THE HEALTH ORGANISATION

The present constitution of the Health Organisation of the League is therefore as follows :

(1) An Advisory Council;

(2) A Health Committee;

(3) A Health Section, forming part of the Secretariat of the League of Nations.

Koviloor Acadamy

1. The Advisory Council.

The Committee of the Office international d'hygiène publique acts as the Advisory Council, for which it is specially fitted by its constitution and functions, as it is a body of government representatives meeting twice a year and empowered to discuss and propose international conventions. The Advisory Council deals with any matter submitted to it by the Health Committee. It initiates and transmits to the Health Committee any question it considers may be advanced by such a procedure. The Advisory Council and the Health Section of the League Secretariat exchange copies of all the documents relating to their work, and despatch copies of these documents to the members of the Health Committee.

2. The Health Committee and its Commissions.

The Health Committee is composed of 16 members, namely, the Chairman of the Committee of the Office international, nine members chosen by that Committee and six members appointed by the Council of the League after consultation with the Health Committee. The League Council, in addition, may appoint four extra health assessors, who count as members. All members are appointed for a period of three years. Health experts from America and Germany have been on the Committee since its inception, one of the American members being the chief of the U. S. Public Health Service. The Health Committee, like the Provisional Health Committee before it, acts as an advisory organ of the Council and Assembly on all health matters, and its work is subject to the approval of these bodies on the same basis as that of the other League technical organisations. If directs the

Koviloor Acadamy

health work of the League, just as the Transit Committee and Financial and Economic Committees direct their respective branches of the League's technical activities. The Committee carries out enquiries and investigations and undertakes preliminary work on which the final deliberations of the Advisory Council may subsequently be based. It may for these purposes appoint special sub-committees or commissions and attach to them any qualified person whose assistance it desires. The Health Committee communicates an annual report to the Chairman of the Advisory Council on the work of the entire Health Organisation during the preceding year. This report also contains the questions with which the Committee proposes to deal, subject to the limits of its competence as defined by the Council and Assembly of the League. The Health Committee is responsible for the policy on technical questions of the Health Section of the League Secretariat.

The Sixth Assembly decided to maintain the budget of the Health Organisation at its present level of one million Swiss francs a year so long as the general budget of the League did not increase and no further tasks were assigned to the Organisation by the Council or Assembly. It also took note of the Health Committee's decision not to increase the number of its commissions, which are ten, namely, (1) Training of Public Health Officials, (2) The Far East, (3) Malaria, (4) Cancer, (5) Cancer Statistics, (6) Tuberculosis, (7) Standardisation of Sera and Biological Products, with a Sub-Committee on Tuberculin, (8) Opium, (9) Anthrax, (10) Budget.

3. Secretariat.

The executive organ of the League Health Organisation is its technical secretariat, which forms the Health Section of the Secretariat-General and whose medical director is Dr. Ludwik Rajchman. The Health Section forms an

Koviloor Acadamy

integral part of the Secretariat-General and as such is administratively subject to the Secretary-General and bound by the rules laid down at the Second Assembly for all League technical organisations.

4. Other Forms of Co-operation.

In addition, by an arrangement concluded with the Soviet Russian delegation at the Genoa Conference, the members of the Health Committee, together with a delegate from the Central Health Authorities of Soviet Russia, constituted a special international commission for discussing the anti-epidemic campaign as it affected Russia.

Russia takes part in the "interchanges" of medical officers of health, contribu es to and benefits by the Epidemiological Intelligence Service, has invited and facilitated various investigations on her territory—notably that of the Malaria Commission—and in other ways shares in the activities of the League Health Organisation.

Lastly, the Health Organisation co-operates on questions concerning public health with the Pan-American Sanitary Bureau, the Red Cross, the International Labour Office and with other League bodies, such as the Opium, Mandates, Transit and Economic Committees.

THE WORK OF THE HEALTH ORGANISATION

Inter-governmental health work cannot encroach on the activities of national health administrations, nor can it embark on purely theoretical enterprises leading to no practical action. Within these fairly wide limits the object of the Health Organisation is to advise the Council and Assembly of the League in all international questions of

Koviloor Acadamy

public health, to establish closer relations between the health services of different countries, to act as a clearing-house for information on public health questions, and, finally, to help bring about the agreement necessary for all international action in public health matters. The whole purpose of this work is practical usefulness in the field of international relation .

I. Intelligence Work and Administrative Co-ordination.

(a) *Epidemiological Intelligence.* — One of the most urgent problems with which the Health Organisation has had to deal was the establishment of a clearing-house for epidemiological intelligence and a central agency for collecting information on health questions of international concern. The first step undertaken in this connection was the collection and analysis of information regarding the epidemics of typhus, relapsing fever and cholera which were still ravaging Eastern Europe at the time when the Health Section began its activities.

Early in 1923 it became possible greatly to extend the epidemiological intelligence work owing to an arrangement concluded with the International Health Board of the Rockefeller Foundation, by which the latter agreed to contribute a sum of $32,840 a year for five years towards the maintenance of the Health Organisation's service of epidemiological intelligence and public health statistics. Under the agreement the work includes :

(*a*) Study of the simplest and most reliable methods of obtaining information regarding the incidence of disease and the progress of epidemics.

(*b*) Comparative study of public health statistics of different countries.

Koviloor Acadamy

(*c*) Study of the world distribution of particular diseases.

(*d*) Comparative study of the incidence of particular diseases in different countries and their public health statistics, with a view to determining the nature and practical significance of observed differences between them.

(*e*) Study of the periodicity of epidemics and the factors which cause or influence such periodicity.

(*f*) Organising, with the concurrence of the public health administrations of the countries affected, missions of enquiry regarding the development of epidemics, or for other purposes referred to in the preceding paragraphs.

(*g*) The publication and distribution of special reports and periodical bulletins.

(*h*) A review of the public health of the principal countries of the world with a view to the issue, if circumstances permit, of reports on the subject as a whole.

(*i*) Organising a rapid interchange of information in regard to particular diseases in cases in which immediate action appears to be necessary.

(*j*) The employment at headquarters or elsewhere of experts provided with requisite assistance and technical equipment.

Current reports on the prevalence of epidemic disease are now received from the health services of nearly all countries where such information is available. The information now being regularly received relates to 67 per cent of the world's population (Europe 98 %; Australasia 87 %; America 68 %; Africa 64 %; Asia 54 %). Weekly or monthly

Koviloor Acadamy

statistics on general and infant mortality and selected causes of death are received from numerous large cities throughout the world. All this information is published in a monthly bulletin entitled "Epidemiological Report", which also contains a general review of the prevalence of the various epidemic diseases at the time of issue. These reports, which have now been published regularly for four years, provide for the first time material whereby those interested may establish the movements of epidemic diseases throughout the world at any given time. An ever-increasing amount of data is thus being collected for the study of medical geography and of the periodicity of epidemic diseases, the material being at the same time of immediate administrative utility. The statistics are revised at the end of each year by the national health services concerned and published in the form of *annual reports* which contain a review of the epidemic situation during the year.

A branch office of the Epidemiological Intelligence Service was opened in *Singapore* in March 1925 in order to study the world's principal plague and cholera centres at close range and to distribute to all Eastern administrations information regarding the prevalence of these and other epidemic diseases of international importance in the chief ports. The practical importance of the prompt distribution of such information in connection with the control of ship-borne infection needs no emphasis. The Singapore Bureau was established by means of a grant of $125,000, to be distributed over 5 years, from the International Health Board of the Rockefeller Foundation. It is anticipated that eventually the Governments concerned will contribute their share toward the maintenance of this Bureau; the Government of the Straits Settlements is in fact already doing so. The Bureau receives at the end of each week telegraphic reports from the 60 principal ports of Asia, Australia and the east coast of Africa, regarding the number of cases and deaths

Koviloor Acadamy

from plague, cholera and smallpox, together with information on various other matters of sanitary interest.

This information is broadcast in code immediately, by the kindness of the French Government, from the French wireless station at Saigon; cables are sent to administrations unable to pick up these wireless messages. Confirmation of the weekly data is sent to each administration contributing thereto in the form of a leaflet.

On receipt of this weekly information in Geneva, by wire, it is communicated promptly to all health administrations in Europe.

The Singapore Bureau also issues monthly reports. An Advisory Committee, composed of delegates from Far Eastern health administrations, meets annually to consider problems connected with the functions of the Bureau.

At the Sixth Assembly, 1925, the French Government suggested the establishment of a sanitary and epidemiological branch office in *West Africa*. The possibility of acting on this suggestion is now being investigated by the Health Committee.

In addition to epidemiological intelligence work proper, researches have been made, chiefly by experts outside Geneva, into the epidemiology of cholora, plague, cerebro-spinal meningitis, scarlet fever, etc.

(b) *Information regarding Medical Statistics and the Organisation of Health Services.* — With the pooling of epidemiological and demographic information brought about by means of the Health Section, the need for uniformity in statistical methods has been increasingly evident. The organisation of different national health services and the various systems employed for collecting and tabulating medical statistics have become a matter of immediate interest to all concerned.

A series of publications have been undertaken in order to meet this demand, namely: (*a*) monographs describing the

Koviloor Acadamy

health services of each country, and (*b*) handbooks on the medico-statistical organisations and publications of different countries. Issues of the first series have been made on Au tria, Czechoslovakia, Denmark, Germany, Hungary, Japan, Latvia, Netherlands, Kingdom of the Serbs, Croats and Slovenes and the Ukraine; of the second series, on Austria, Belgium, England and Wales, Netherlands and Spain. Further numbers of both series are in hand.

A report on the general sanitary progress made in the different countries during 1924 and on events of universal interest to sanitarians has also been prepared.

In addition, groups of experts have been appointed to study special aspects of the existing incomparability of medical statistics. The work of one group has resulted in a proposal for a uniform definition of "still birth," which has been submitted to all Governments. Its recommendations are of great importance in furthering international comparison of statistics on live births, still births and infant mortality.

Another group of experts has studied the problem of primary tabulation of joint causes of death and made certain recommendations aiming at reducing the effects of differing methods of dealing with this problem. In most countries more than one cause of death is inscribed on death certificates. The selection of one of these causes for statistical purposes is not made on a uniform plan and consequently international comparison is impossible in the case of many diseases. For example, a death caused by pneumonia com plicating influenza would be ascribed to "influenza" in some countries, to "pneumonia" in others.

Other expert groups are studying the best age and sex classification to be employed in annual reports on mortality statistics and the adoption of international rules for the standardisation of mortality rates for different ages and sexes in different countries.

Koviloor Acadamy

The Health Section has also undertaken the study of the International List of Causes of Death, in preparation for the next decennial revision. Various countries and private bodies such as the American Public Health Association and the Scandinavian Conference of Statisticians have submitted proposals, and hese will be communicated to the health services of other countries for comment and counter-proposals.

(c) *Collaboration of Vital Statisticians.* — In order further to promote collaboration between medico-statistical offices and their close contact with the Service of Epidemiological Intelligence and Public Health Statistics, the Rockefeller Foundation made an additional annual grant of $21,000. By this means, those who are actually in charge of the compilation of medical statistics in their respective countries are enabled to study on the spot the methods used in other countries and to discuss their common problems together. These studies have generally taken the form of group conferences, though individual scholarships have also been granted. The subjects studied are, *e.g.*, the organisation and presentation of census, birth and death statistics; the notification of epidemic diseases; and statistics of causes of death (with recommendations regarding the organisation of such statistics).

(d) *Interchanges of Public Health Personnel and Individual Fellowships.* — The clearest instance of how the Health Organisation can be instrumental in bringing about mutual understanding between national Health Administrations is afforded by the system of interchanges of public health personnel that was started in October 1922. It has been possible to undertake this work largely owing to the generosity of the International Health Board of the Rockefeller Foundation, which contributed $60,080 a year for three years to the League funds for the purpose. In 1925 the sum was raised to $100,000, and in 1926, $75,000 were contributed. With the help of these funds, which supplement

Kovilool Academy

an appropriation for this purpose in the League's budget, the Health Committee has organised a system of study tours, including addresses, observation and practical work for medical officers of health who are commissioned by their sanitary administrations to study the way health problems are dealt with in foreign countries.

The participants in an "interchange" are picked men chosen by their respective health administrations. In general the interchange consists of :

(*a*) A period devoted to studying documents (handbooks on the sanitary administration and problems of the country concerned, the texts of its sanitary legislation, etc.), accompanied by lectures on the subject by the sanitary authorities of the country visited;

(*b*) A period of practical work during which time the participants visit, or sometimes work in, various branches of the health administration they are studying;

(*c*) A final conference, during which the participants present reports and discuss with the organisers of the interchange and with each other what they have learned during the whole period.

Frequently this final stage is taken at Geneva and accompanied by a study of the organisation and working of the League, with particular attention to the Health Section.

There are two broad types of interchanges and a number of combinations or variations of the two, namely :

(1) A so-called "collective general interchange", where the participants number about twenty and spend six weeks studying the general health administration of one or at most two countries;

(2) A "specialist interchange", where medical officers who are specialists in some one subject, such

Koviloor Acadamy

as, *e.g.*, school hygiene or tuberculosis, visit a number of countries to study the way this particular problem is dealt with in each. The number of participants in such interchanges rarely exceeds ten, and the time varies greatly.

Interchanges of one form or another have been held in most European countries, in South and Central American countries, in the United States, Canada, West Africa, and Japan. Practically all countries, including the United States, Russia and Turkey, as well as the Members of the League, take part in interchanges. Two to three general interchanges are held a year, and a similar number of specialist interchanges. Among the latter there have been interchanges of, *e.g.*, specialists in industrial hygiene (this was conducted in collaboration with the International Labour Office), school hygiene, malaria, tuberculosis, vital statistics, port sanitation (in the Mediterranean basin, and subsequently in the Baltic). An interchange for sanitary engineers is also being arranged as a development of the system.

In addition, there are a certain number of individual fellowships for specialists who undertake some research work of exceptional importance for international public health and who are approved for the purpose by the League Health Committee. Certain high medical officers of Australia, Canada, and New Zealand, as well as several Europeans, have benefited by these fellowships. They are, in general, intended particularly for countries that, owing to their remoteness, cannot easily take part in collective interchanges.

Roughly a hundred medical officers a year go through these interchanges, and an association has been formed by former participants to further the cause of public health and particularly the activities of the League Health Organisation This is in itself evidence that this work is achieving its purpose, which is not only to benefit administrations

Koviloor Acadamy

concerned through the technical knowledge gained by the participants in these interchanges but also to help build up an *esprit de corps* and habits of co-operation and mutual confidence between all the national health administrations which, in view of the growing inter-dependence of the modern world, are bound to work together more and more frequently and closely.

2. Co-ordination of Scientific Researches.

The second group of activities conducted through the Health Organisation may be defined as applied research work — that is, the initiation of laboratory investigations conducted simultaneously and on the basis of a common plan by leading institutes all over the world and directed to securing the practical application of the results of this research. The Health Organisation cannot finance pure research work; it confines itself to facilitating the application of discoveries already made.

(a) *Therapeutic Sera.* — Thanks to the progress achieved in immunisation against infection by microbes, the use of sera is becoming one of the most important weapons at the service of science for combating infectious diseases. In order to give full effect to this new way of fighting disease both in curative and preventive medicine, it is necessary to get international agreement on methods for measuring he anti-toxic action of different sera. Hitherto such methods have varied not only between countries but even between different laboratories in the same country. Furthermore, doctors in countries that do not produce sera must use imported products of very varying origin. In spite of the indications on the serum tubes the doctor has no way of ascertaining exactly the potency of the product he is using, since the units for measuring a serum may vary in different coun-

Koviloor Acadamy

tries. The result is that information as to the efficacy of some serum is often contradictory and it is impossible to compare internationally the results obtained. Hence there is urgent necessity for a standardisation of sera in order to help make effective the fight against bacterial diseases.

For all these reasons some way of standardising internationally the units and methods employed had long been considered desirable, and many attempts were made before the war to achieve this end. But these efforts had always been hampered by the difficulty of securing sufficiently close and prolonged co-operation between a sufficient number of laboratories and research institutes. After the war the difficulties appeared even greater, but it was found possible to overcome them through the agency of the League Health Organisation.

In December 1921 the Health Organisation held a Conference in London on the standardisation of sera and serological tests, as the starting-point of a general enquiry. State Health and Serological Institutes of Austria, Belgium, France, Germany, Great Britain, Italy, Japan, Poland, Switzerland, and the United States took part in the preliminary conference, which drew up a programme of enquiry and research to be carried out by different laboratories and centralised in the Copenhagen Institute, acting as a clearing-house for the work.

From September 25th to 27th, 1922, a meeting of the Sub-Committee on Anti-tetanus and Anti-diphtheria Sera was held at Geneva, attended by representatives of the State Epidemiological Laboratories of Denmark, France, Germany, Great Britain, Italy, Japan, Soviet Russia and the United States, at which the anti-toxic unit for diphtheria was re-established and an international unit proposed for anti-tetanus serum.

Koviloor Acadamy

The problem of standardising anti-tetanus serum is very difficult in view of the large number of units in existence, and no final solution was reached at this conference. Numerous researches have since been undertaken in German, Danish and American laboratories and have made it clear that the unit most largely used at present might perhaps be universally adopted in order to standardise this product. Everything points to the possibility of reaching an agreement on this point.

Before the war the Ehrlich unit was internationally recognised as the standard for anti-diphtheritic serum, and sample doses were sent from the Ehrlich laboratories in Frankfurt to all the big serological institutes of the world. During the war this was, of course, impossible, and the result was that the various laboratories, after running out of their supplies of Ehrlich serum, had no method of testing their own products by reference to a standard unit. By 1922, when contact was re-established through the League Health Organisation, the units used by the various laboratories, although based on the Ehrlich unit, really varied somewhat.

At the Geneva meeting the Ehrlich unit was re-established and it was decided to preserve uniformity in the future, by stipulating that the Sero-therapeutic State Institute of Denmark should be used as a central laboratory, which will periodically receive specimens of the standard antitoxin, will thus always be in a position to send samples of the standard to other State institutes, and will examine the sera used as standards by the various States at least once a year. Should any variations be detected, it will be suggested to the institute concerned that comparative tests be carried out. It is further understood that any institute shall be free to send to Copenhagen samples of its standard serum at any time with a request that they should be tested against the international standard. A number of countries have already availed themselves of this method of control.

Koviloor Acadamy

Results of the work on anti-pneumococcus and anti-dysentery sera were examined and a further programme of research work adopted at the Second General Conference held at the Pasteur Institutein Paris from November 20th to 26th, 1923. This Conference not only marked a fresh and successful stage in the long cumulative process which all research work entails but showed how the basis of this work is widening as it proceeds, for, at this Second Conference, State Health Institutes from Austria, Belgium, Denmark, France, Germany, Great Britain, Japan, Poland, Roumania, Russia, Switzerland, and the United States were represented.

The Conference took up the question of standard units for anti-meningococcus, anti-pneumococcus, anti-streptococcus and anti-dysentery sera. As regards the latter a plan of research was drawn up and carried out in a number of laboratories, which made it possible to call a further Conference at Geneva in September 1924, where a standard unit was established as regards anti-dysentery serum—a problem that hitherto had seemed impossible to solve.

Recently a number of new questions have been taken up, such as the standardisation of anti-anthrax serum and of tuberculin, the product prepared from the tuberculosis baccillus and used either for diagnosing or treating tuberculosis.

(b) *Sero-reactions of Syphilis.* — The Paris Conference also decided to study the question of unifying the laboratory methods used for diagnosing syphilis. It was important to get some authoritative information on the value of the different serological or physico-chemical reactions that make it possible to discover syphilis by blood tests of infected people. A conference of laboratory experts was held in 1923 at the Sero-therapeutic State Institute in Copenhagen and attended by Austrian, Belgian, Danish, French and German serologists. These serologists worked side by side in the laboratory, each using his own technique and all studying

Koviloor Acadamy

a great number of samples of infected blood. The purpose of this investigation was not to reach agreement immediately on some standard method that could be recommended for international usage but to choose among the numerous existing methods some one that could be used as an auxiliary to check the results obtained in each country by the methods in use in that country. The Conference was successful in its object; work is continuing on the subject and there is every ground to believe that at a future conference the question of an international standa d test will be solved.

Some of the resolutions of the Copenhagen Conference, concerning the international adoption of a uniform system of notation to indicate the results of sero-reactions and the advantage of arranging free diagnosis in laboratories possessing a staff of properly qualified specialists, were communicated to the various Governments, which received them favourably and are proceeding to put them into execution.

(c) *Biological Products.* — In the interests of patients themselves it essential that remedies whose efficacy and toxicity cannot be determined by chemical processes, including such precious products as digitalis, the great specific for heart disease, or insulin, the specific against diabetes, should be administered in accurately measured doses. Some of these products are chemically unstable and their therapeutic properties bear no constant relation to their chemical composition. It is therefore generally necessary to standardise such preparations physiologically—that is, by the effect on a particular animal of a dose of standard size or some similar method. The methods used in different countries vary widely and a number of such products are on the market although they are practically useless from a medicinal point of view. This emphasises the necessity for a uniform and rigid method of standardising so-called biological products.

Koviloor Acadamy

In order to cope with this state of affairs the Health Committee was instrumental in convening two international conferences, one at Edinburgh in 1923, the other at Geneva in August 1925, in order to bring about agreement on methods of measuring the therapeutic properties of biological products. The Geneva Conference, in which laboratory experts from Austria, Belgium, Canada, Denmark, France, Germany, Great Britain, Holland and Norway took part, was able to make a whole series of definite recommendations as regards biological tests for digitalis, the arsenobenzenes, certain vermifuges and various organic extracts.

As regards digitalis, the preparations of which notoriously vary widely in activity, it was decided that the best standard was a unit consisting of a certain weight of the pure powder from dry digitalis leaves, kept free from moisture and oxidisation. Two methods were accepted for testing the physiological activity of the standard preparation, and experiments were decided upon to investigate further methods.

The extract of the pituitary gland is an important and powerful but uncertain and variable drug much used in obstetric work. To show the chaotic conditions at present existing in this field it may be mentioned that in one country —where conditions of control, etc. are particularly good— a series of commercial preparations when tested showed a range of activity of from 1 to 80; all over the world evidence is accumulating of the dangers resulting from this state of affairs.

The conference decided upon a method of labelling pituitary preparations by the number of units of activity they contain, a unit being the physiological activity of 1/2 milligramme of a dry, stable standard, as prepared and tested in certain ways also agreed upon by the Conference.

Koviloor Acadamy

Insulin, whose recent discovery and effectiveness against diabetes are too well known to need further mention, has from the first been a relatively well standardised preparation owing to the action of the Toronto Committee that first introduced this product to the world. This committee from the beginning made regulations for the manufacture of insulin and prescribed methods for standardising the product and labelling preparations in units of activity. Experience has shown, however, that different workers get the best results with different biological methods and that even when the same method is used in different countries the differences in animal reactions, due to variations in climate, conditions of feeding, etc., have led to widespread discrepancy between units as determined in different countries when expressed in terms of biological reaction. Here, too, it was decided to have the physiological efficacy of a dry stable preparation as the standard of reference. A unit of insulin corresponding to that biologically measured by the Toronto Insulin Committee has now been defined as the physiological activity contained in one-eighth of a milligramme of the standard prepa ation. This proposal was put forward by the Toronto Committee and unanimously adopted by the Geneva Conference.

Salvarsan, the great specific against syphilis, was ori ginally produced entirely by one German factory. From the first it was obvious that variations occurred in the toxicity of salvarsan and its different derivatives which no chemical method could detect and which could be revealed only by a biological test.

The Georg Speyer Haus at Frankfurt, where Ehrlich discovered salvarsan, from the first exercised a biological control on the whole output of salvarsan of German manufacture in order to prevent unduly toxic or ineffective samples from coming into circulation. The war made it necessary for other countries to manufacture salvarsan and to

Koviloor Acadamy

develop their own methods of biological control. These were made equivalent to the methods employed in Germany, so far as these methods were known, but in the nature of the case differences in the standards and tests applied soon grew up in the different countries. The matter is of special interest and importance to-day owing to the fact that the patents governing the production of salvarsan and its most important derivatives expire in the next few years, after which any factory in any country of the world will be free to make and sell these products. In view of the extent to which quackery already exploits the fear of venereal disease and the commercial temptations involved, the world might be flooded by preparations of widely varying toxicity, with disastrous results. A common international standard of efficacy and safety was imperatively required.

The Conference decided upon a system of standard samples for salva san and its established derivatives. The toxicity and potency of these samples should be biologically controll d and corresponding preparations all over the world would be tested by these standards, which should be prepared and deposited in the original laboratory at Frankfurt, just as the standard samples of anti-diphtheria serum are deposited in the Copenhagen Serological Institute, the standard samples of pituitary extract in the Hygienic Laboratory at Washington and standard samples of insulin at the National Insti ute for Medical Research in London.

As regards extract of thyroid gland the Conference was of opinion that a biological standard was hardly necessary and that chem cal tests would suffice to test the potency of this product. The Conference also considered methods of standardising certain powerful ve mifuges, such as x ract of the male fern and oil o. chen podium (used for hookwo m disease). Furthe investigation were decid d upon as regards ergo. and some experiments in the matter of vita-

Koviloor Acadamy

mines, notably an attempt to standardise cod-liver oil from the point of view of its vitamine content.

The participants in the conferences held hitherto have been scientific specialists whose opinion in no way commits the Governments of the countries whose nationals they happen to be. But when the present series of researches has been concluded and a greater number of standards have finally been adopted by committees of experts, the Health Committee proposes to recommend holding a conference of Government representatives and to submit the methods advocated by the specialists for official and international adoption in the interests of public health. In this way effect will be given to the recommendation proposed by the Czechoslovak delegation and adopted by the Fourth Assembly suggesting that Governments should be invited to co-operate in the work of standardising sera, serological tests and biological products, by giving practical effect to the results achieved by the Health Committee in this branch of applied science.

3. Securing Joint Action in the Combating of Epidemic Disease

The third group of activities conducted through the Health Organisation is directed toward making that Organisation the agent for developing mutual understanding between the Health Administrations of different countries, initiating bilateral or general agreements between these Administrations for specific purposes, and executing the common policies decided on by the national Administrations at inter-Governmental conferences.

(a) *Work of the Epidemic Commission.* — The first example of this kind of work and one of the first health problems with which the League had to grapple was the question

Koviloor Acadamy

of epidemics in Eastern Europe. In order to meet it, the Epidemic Commission, as has already been shown, was set up as a temporary organisation by the Council in May 1920. The three members of the Commission were attached to the Health Section as soon as the latter was formed.

The task of the Commission was to prevent the spread of epidemics in Eastern Europe, and it was decided that this should be carried out on the lines recommended by the Health Conference summoned by the League Council in London, April 14th to 17th, 1920. The chief measures suggested by the Conference comprised : (*a*) the organisation of quarantine stations; (*b*) the equipment of hospitals; (*c*) measures for cleansing and disinsecting; (*d*) supply of food, clothing, soap, motor transport, and similar necessaries.

The Commission helped to strengthen the Health Administrations of towns and countries in Eastern Europe that were combating epidemics. It did not appoint its own agents and act directly but worked through the existing national Health Administrations, to which it furnished such material aid as it could provide in order to build up a permanent system of sanitary defence on both sides of the western frontier of Russia. This difference of method and objective alike was the fundamental distinction between the inter-Governmental work of the Epidemic Commission and the private and charitable aid of the Red Cross and similar bodies, which worked directly on the spot, through their own organisations, to deal with specific emergencies.

The work of the Commission constituted a first experiment in international sanitary co-operation on a large scale. The funds for the work were derived from contributions received from Governments in reply to appeals made by the Council and by the First, Second and Third Assemblies. Certain donations have also been made by the League of Red Cross Societies. Altogether some £300,000 were raised.

Koviloor Acadamy

In 1922 the Third Assembly voted 50,000 francs to cover expenses closely associated with the regular work of the Health Organisation.

The Commission first went to work in Poland, which, owing to its central position, the length of its Eastern frontier, and the great numbers of refugees coming home from Russia, was the key-point of the sanitary defence of Central Europe. Later the Commission extended its activities to Latvia and Russia, where offices were opened in Moscow and Kharkov. In May 1922 an agreement facilitating the work of the Commission in Russia was drawn up between the Epidemic Commission and the Soviet authorities, by which the members of the Epidemic Commission were officially recognised and granted diplomatic privileges and immunities in Russia, and close co-operation was established between them and the Soviet health authorities. The funds at the disposal of the Commission were never more than a fraction of the monies expended by the health authorities of the countries concerned, but nevertheless, by rigid economy, it was possible to render very considerable help. The Commission bought and delivered to the national health authorities the materials most difficult to obtain at the outset of the campaign, such as clothes, soap, drugs, vaccines, hospital stores, motor transport, food and fuel. In Poland it was able to supply complete hospital equipment for 50 hospitals of 50 beds each. It aided in the establishment and maintenance of disinsecting, cleansing and observation stations on the main routes by which infection was being brought from Russia westward into the border States, particularly into Poland, and it was instrumental in improving the condition of internment camps, establishments for repatriates and refugees, hospitals for infectious diseases, etc. The Commission was able to furnish expert advice and to co-ordinate the action required in the different countries concerned. With more than two years'

Koviloor Acadamy

continuous experience of the work the Commissioners acquired a unique position of expert authority and were able to exercise an influence which was recognised on all sides as most beneficial. They strengthened and supported the efforts of the public health services of the different countries concerned, including that of Soviet Russia, and they were able to indicate at critical times the weak points of local organisation and to strengthen them by the supply and judicious distribution of essential material (including drugs and vaccines), which could not be obtained otherwise.

In the autumn of 1922, following upon the war in Asia Minor, a great stream of refugees began pouring into Greece. The number quickly reached one-fifth of the total population of Greece and continued to increase. Most of the refugees came over in a state of destitution and in conditions permitting of no sort of sanitary control whatever. The Council, acting on an urgent resolution of the Assembly, which was then in session, appointed Dr. Nansen as its High Commissioner for Refugees, and appeals were issued by the Third Assembly to which some of the Governments there represented responded almost immediately by offers of money. Of these monies Dr. Nansen, at the request of the Greek Government, assigned £5,000 for sanitary purposes. The Greek Government thereupon requested the help of the Epidemic Commission, two of whose members were sent to Greece. One of these members acted as technical adviser to the Greek Government and inspected all the refugee camps on the mainland and among the islands. A second member of the Epidemic Commission, acting again at the request of the Greek Government and in collaboration with an epidemic committee set up by the Greek Health Ministry, organised a preventive vaccination campaign among the refugees, using for the purpose the £5,000 assigned for medical purposes by Dr. Nansen, as well as some

Koviloor Acadamy

of the remaining funds of the Epidemic Commission. Some eighty Greek doctors, medical students and inspectors of hygiene were recruited, divided into ten vaccination columns and distributed among the refugee camps, which for administrative purposes were divided into two zones, with centres respectively at Athens and Salonica. Altogether some 550,000 refugees were vaccinated against smallpox, cholera and enteric fever.

Besides the task of grappling with the emergency created by the influx of refugees, there is the permanent problem of stamping out malaria (which is endemic in Greece and finds very fertile soil in the refugee population) and of organising an effective public health system. This again is part of the general problem of assimilating the vast and destitute refugee population, a tremendous problem that the Greek Government is now facing and for which it requires financial aid. With the help of the League Council and Financial Committee, an international loan of £10,000,000 was raised and a scheme applied for absorbing and settling the refugee population (1). As part of this scheme the Health Organisation helped the Government to grapple with the two principal public health problems confronting Greece to-day—namely, eradication of malaria and organisation of the Public Health Service.

(b) *Warsaw Health Conference.* — During the first nine months of 1921 the epidemic situation in Eastern Europe became somewhat easier, but by the autumn the Russian famine was setting up new waves of migration that spread disease far and wide and lowered the resisting powers of whole populations. Russia had been ravaged by disease during four or five years as a result of the mass movements

(1) For a full account of the scheme and its working, see the pamphlet in this series that deals with the Financial and Economic Organisation of the League.

Koviloor Acadamy

of troops and refugees and the laying waste of whole provinces caused by the war, followed by the breakdown of administrative machinery and economic collapse during the revolution and the ensuing civil wars. The diseases most rife were typhus, relapsing fever and cholera. Of these the first two might be said to have become pandemic in Russia and had increased more than thirtyfold as compared with their prevalence before the war. This situation put a heavy strain on the States that had been formed partly out of what were the western marches of Russia, especially as millions of the population of these States had been forcibly evacuated into Central Russia and even Siberia in 1915-16 by the Imperial Russian armies and were now returning to their homes. The Border States, especially the Baltic States and Poland, were therefore faced, just as they were getting on their feet and trying to consolidate the life of the State, by the double task of filtering these masses of re-emigrants through an efficient network of quarantine stations and of finding work and homes for them.

This task had proved such a crushing burden to the Border States and was so obviously a matter affecting the whole of Europe that the Polish Government in January 1922 approached the President of the League Council, requesting him to summon a European Health Conference as a matter of urgency in order to examine the situation and concert measures for meeting the menace. The Council considered it preferable that the Polish Government should itself summon this Conference and pointed out that Article 21 of the League Covenant, as interpreted at the second meeting of the Assembly, made it possible for States Members of the League to summon special conferences designed to carry out their obligations under the Covenant, and to avail themselves when doing so of the machinery and facilities afforded by the League. Consequently, the

Koviloor Acadamy

Council put the services of the Secretariat and the League Health Organisation at the disposal of the Polish Government for the proposed conference.

The Warsaw Health Conference was accordingly summoned by the Polish Government and met on March 20th, 1922. The States attending the Conference were Austria, Belgium, Bulgaria, Czechoslovakia, Denmark, Esthonia, Finland, France, Germany, Great Britain, Greece, Holland, Hungary, Italy, Japan, Latvia, Lithuania, Norway, Poland, Roumania, Russia, the Kingdom of the Serbs, Croats and Slovenes, Spain, Sweden, Switzerland, Turkey and the Ukraine. The Free City of Danzig was also represented. The Council of the League had put the services of the League Health Organisation and Secretariat at the disposal of the Conference.

A survey of the situation with plans for an anti-epidemic campaign was submitted to the Genoa Conference. The Governments concerned, however, did not see their way to give effect to this scheme owing to the expense involved.

On the other hand, the second and third proposals of the Warsaw Conference bore immediate practical fruit. The first of these proposals was to strengthen the medical personnel of Russia and the Border States by organising courses in Warsaw, Moscow, and Kharkow for the training of public health officials in combating epidemics. The money for this undertaking was provided by a donation of £5,000 from the League of Red Cross Societies. The first course, which was started in November 1922, was completed three months later and fresh courses organised forthwith. The teaching staff at these courses was mostly composed of local doctors of distinction, but in addition eminent foreign specialists were engaged as lecturers. There were also exchanges between the Polish and Russian lecturers. The general courses were continued during the year

Koviloor Acadamy

1924 and four special courses in malariology given. The need for trained personnel in Eastern Europe, particularly in Russia, had been very keenly felt in view of the prevalence of disease and the unsettled conditions which for several years interfered with the training of doctors. As a sort of material basis for these courses public health museums were set up in the three centres of instruction, with specimens and models illustrating the various phases of anti-epidemic work.

The third proposal of the Warsaw Conference, which was also immediately put into effect, was that a series of conventions should be concluded between the various Border States themselves and between the Border States and Germany, Czechoslovakia, Hungary, Austria, the Kingdom of the Serbs, Croats and Slovenes, Bulgaria, etc. A number of such Conventions have already been concluded and others are being negotiated. These Conventions are designed to strengthen the sanitary defences and to promote closer collaboration between the respective Health Administrations. The Conventions deal with the exchange of information about the incidence of disease, prompt notification, exchange of publications, etc.; define what constitutes infected districts and what measures should be taken to prevent the spread of disease; define the measures to be taken respectively, on land and water frontiers, a regards persons, baggage, goods, train, road and boat transport; measures such as inspection, disinsecting, surveillance, observation, quarantine stations and other special measures in frontier zones, etc. The Conventions include three new departures : the first is that the Health Administrations notify each other directly of ascertained or suspected cases, instead of as formerly through diplomatic channels. Copies of the information thus sent are, however, communicated to the diplomatic representative of the State receiving it, to the Foreign Office of the State sending it, and generally also to the Health Section

Koviloor Acadamy

of the League Secretariat (which constitutes the second new departure). The third new departure is that most of these Conventions contain a provision that in case of differences regarding the interpretation or application of the Conventions, the contracting Powers, if unable to arrive at a direct agreement, shall resort to the Health Organisation of the League as mediator.

4. The Health Organisation and International Sanitary Conventions.

(a) *International Sanitary Convention of 1912.* — Another scheme, started on the initiative of the Health Committee and belonging to this same group of its activities, was the despatch of a Commission to the Eastern Mediterranean and to Black Sea ports to enquire into international arrangements regarding the prevention of epidemic diseases in the Near East, in connection with the need for revising the international Sanitary Convention of 1912.

The war has broken up an area which was formerly under one Health Administration and has greatly disorganised some of the Health Administrations themselves. Moreover, conditions have changed greatly in matters of first importance from the point of view of health work. For instance, the annual pilgrimages to the Moslem Holy Places in Palestine and the Hedjaz used to be undertaken largely by water but are now more and more being conducted overland by rail and road. The result is the urgent necessity of revising the International Sanitary Convention concluded at Paris in 1912 in order to bring it into conformity with the altered conditions.

A revised draft of the first part of this Convention has already been prepared by the Office international d'hygiène publique with the object of including typhus and relapsing

Koviloor Acadamy

fever in the Convention and generally of making it applicable to modern conditions in the light of modern scientific knowledge. The Commission of Enquiry, which was sent out in full agreement and after preliminary understanding with the Office international d'hygiène publique, made a thorough investigation of the whole position and drew up a report to the Council, suggesting a revised text for Parts II, III and IV of the Paris Convention, as well as a number of special measures designed to unify and improve health control in the areas of : (1) Egypt and the Suez Canal; (2) the Arabian Peninsula, Palestine and Syria; (3) Constantinople and the Black Sea ports. The report also emphasised the need for an International Sanitary Committee, under the auspices of the League Council, to co-ordinate the work of the Public Health Authorities throughout the Near East.

The report and the revised text will be considered at a conference summoned by the French Government in April 1926 to revise the Paris Sanitary Convention. The Council has offered the French Government the assistance of the technical organisations and Health Section of the League Secretariat for such preparatory work as may be considered necessary and to facilitate the work of the conference itself. Certain Governments have suggested the setting-up of a preparatory committee representing the *Office International* in Paris and the Health Section in Geneva, to collect and co-ordinate the various agreements negotiated and concluded by Governments (such as the Pan-American Sanitary Convention) and to revise the chapter of the Convention relating to the Far East (a great deal of information bearing on this question was gathered by the Health Committee's Far Eastern enquiry, which is mentioned below).

(b) *Quarantine Formalities.* — The Government of the Netherlands asked the Health Committee for its assistance

Koviloor Acadamy

in grading ports from a sanitary point of view, so that a ship which had been given a clean bill of health at a duly qualified port would be admitted without further formalities to ports in other countries, provided that it had not touched at an infected port on the way. The Dutch proposal would involve expanding and modifying existing conventions so as to include a greater number of countries and perhaps to provide for periodical international inspection and a preliminary survey under League auspices of port sanitation. The Health Committee drafted a model convention which it recommended for adoption by maritime nations. At the same time the Health Committee emphasised the necessity of inserting a clause in such conventions providing for recourse to an international health organisation in the event of difficulties arising as to the interpretation of the agreement reached. The model was based on a convention negotiated between the Belgian and Dutch public health services, in consultation with the Health Committee (of which the heads of the Dutch and Belgian health services are both members).

(c) *Inland Waterways.* — International sanitary conventions do not apply to inland waterways. In order to complete the series of agreements which have for their purpose the prevention of epidemic diseases with a minimum interference to trade and traffic, the Health Committee set up a Joint Sub-Committee with the League Transit Committee to study the question of establishing certain minimum standards for the health administration of waterways. The war, by setting up many new States and altering frontiers, has multiplied the number of international waterways in Europe. At the same time the epidemic condition of Russia and general post-war conditions made it doubly necessary that there should be effective measures against the spread of infectious diseases along waterways. For this purpose the Joint Sub-Committee laid down certain principles regarding the duty of Health Administrations of riparian States to notify

Koviloor Acadamy

promptly and frankly the existence of a disease, to avoid obstructing commerce and circulation by burdensome charges or restrictions, while maintaining a reasonable level of sanitary efficiency, and so forth. It went on to collect information bearing on these points and finally drew up a draft Convention, which, after a few changes, was approved by both the Health and Transit Committees. The object of this Convention is to facilitate traffic and generally to pay every regard to the interests of commerce while ensuring effective sanitary defence. A clause in the Convention provides that copies of all notifications of diseases made between the Contracting Parties should simultaneously be transmitted to the League Health Organisation. The Health Administrations of the High Contracting Parties are also to furnish an annual report to the League Health Organisation on the way in which sanitary control of their waterways has been working. The High Contracting Parties, moreover, undertake to submit any disputes arising out of this Convention for an advisory opinion to a mixed committee formed of representatives of the Health Committee and the Transit Committee of the League (1).

The draft Convention is now being circulated to the Governments for them to take whatever action they see fit. There are two possibilities. Either a special conference will be held in which a general international convention will be drawn up on the basis of this draft, or it will be used by various Governments for a series of local agreements between neighbouring countries.

5. Enquiries and Investigations

(a) *Enquiry in Far-Eastern Ports.* — On November 3rd, 1922, the Health Committee, at the suggestion of its Japa-

(1) For a fuller summary of the draft Convention, see the pamphlet in this series dealing with the work of the Transit Organisation.

Koviloor Acadamy

nese member and with the approval of the Governments concerned, sent a small mission on a six-months journey of investigation to the chief ports in the Far East for the purpose of studying the different methods in force for sanitary, anti-epidemic and quarantine regulations, with particular attention to the necessity for preventing the spread of diseases by sea-borne traffic. The object of collecting this information is partly that it is useful in itself and partly that it may serve as the basis for a conference between the Powers concerned for co-ordinating and tightening up sanitary and anti-epidemic measures throughout the Far East. This is important, for, although temporarily overshadowed by the fresh giant source of land-borne infection from Russia, sea-borne diseases coming from the Far East have been the main enemy of sanitary authorities all over the world.

Dr. Norman White, head of the Epidemic Commission and former Sanitary Commissioner with the Government of India, who was selected for this mission, left Geneva in November 1922 and returned in July 1923. He represented the League Health Organisation during the Far-Eastern Red Cross Conference, the first of its kind, held in Siam, and thence travelled to Singapore, Java, Hong-Kong, Shanghai, visited Japan, Formosa, and Corea; thence through South and North Manchuria as far as Harbin; afterwards to Peking, Newchang, Dairen, Manila, Tongking, Annam, Cochin-China and Cambodia, the Federated Malay States, Penang, Rangoon, Ceylon, Colombo, Calcutta, Simla, Bombay. Throughout the journey Governments and local authorities gave every assistance in their power, and the mission was consequently able to bring home a mass of information, both on the incidence of epidemic diseases, such as cholera, bubonic plague, pneumonic plague, and smallpox, and on the methods of port health administration, of collection of vital statistics, and of combating epidemics in the various countries.

Koviloor Acadamy

The information thus obtained led to the setting-up of the Epidemiological Intel igence Bureau at Singapore and is part of the material on which revision of the Far Eastern chapter of the International Sanitary will be based.

(b) *Cancer Enquiry.* — An enquiry into the causes of the pronounced difference in certain forms of cancer mortality revealed especially in the vital statistics for England, Wales, Holland and Italy was decided upon by the Health Committee in May 1923 at the instance of the British member. This enquiry was felt to be of great interest to public health, particularly at the present moment, when the problems of cancer are being studied in many countries, as it would : (1) reveal to what extent the observed increase is real and how far due to better diagnosis, completed records, etc.; (2) make possible comparisons between different countries and so widen the area available for investigation. A Sub-Committee was set up to deal with the matter.

The enquiries made so far have shown that the differences of cancer mortality in the countries studied are real and are not due to better diagnosis in one than in the other. The studies undertaken to discover the reasons for these variations are not yet complete,. but certain interesting conclusions have already been reached. For instance, in all three countries the proportion of cases in which operations could be performed at a stage sufficiently early to give hopes of cures is, unhappily, very small. On the other hand, the lower rates of cancer mortality in the Netherlands and Italy as compared with England cannot be attributed to the greater frequency of sergical intervention in the first two countries, which may ind cate that cancer in England is more malignant. At present the Cancer Commission of the League Health Committee is studying the possible relationship between the frequency of the types under consideration and the fertility, lactation, age and birth place of the mother, and the

Koviloor Acadamy

Commission is following with great interest the studies conducted in Switzerland on the possible correlation between cancer and goitre and those undertaken in the United States, which seem to show that pre-disposition to cancer is more pronounced in America among females of British than those of Italian origin.

(c) *Enquiry into Diseases in Tropical Africa.* — A further enquiry undertaken by the Health Committee concerns the incidence of sleeping-sickness and tuberculosis in Equatorial Africa, where the war gave rise to an increase of disease and a relaxation of control. The Health Committee appointed a committee of experts from the countries—Belgium, France, Great Britain—that have colonial interests in Tropical Africa.

The report of this committee suggested the sending of a special mission to a region infected with sleeping-sickness, to investigate certain problems of prime importance in the prevention and treatment of the disease. The suggestion was approved by the Health Committee and the Council, which directed the Secretary-General to communicate with the Ministers for Foreign Affairs of Belgium, France, Great Britain, Italy, Portugal and Spain asking if they would support the idea of holding a conference of their Colonial Ministers to discuss, from the administrative and economic points of view, the possibility of despatching such a mission to Africa. All the Governments concerned agreed to the proposal and, on the invitation of the British Government, the Conference was held in London from May 19th to 22nd, 1925.

The recommendations adopted with regard to administrative procedure related to the liaison which should be established between medical officers and administrative officials stationed on either side of a frontier, to the adoption of a sanitary passport for natives desiring to go from one

Koviloor Acadamy

country to another, and to the advantages of co-ordinating statistics of sleeping-sickness.

The Conference recommended further that an international commission should be entrusted with investigations along certain lines of a series of problems relating to the epidemiology of sleeping-sickness. The investigations on this subject undertaken by laboratories in different African countries should be continued and co-ordinated. The International Commission will remain at Entebbe on Lake Victoria for one year, as the Governm nt of Uganda has notified the Council that it will be glad to place the local laboratory at the disposal of the Commission for that period. At the end of the year the Commission will report to the Health Committee. The situation at Entebbe is particularly favourable to the study of subjects which the Conference considered would throw light on the prevention and treatment of sleeping-sickness.

Finally, the Conference decided to request the Governments concerned to contribute to a fund to cover the expenses of the expedition and suggested that these Governments should seek to obtain a credit of £3,000 in the next budget of the Health Organisation for the work of the Commission. If up to the present the campaign against sleeping-sickness has not been crowned with success except in local instances, it is partly because of lack of co-ordination, and the present programme ensures the scientific collaboration of countries interested in its prevention.

(d) *Combating Malaria.* — At the same session of the Health Committee it was decided to undertake an enquiry into the most economic and efficient methods of combating malaria. This enquiry was undertaken in view of the fact that during and since the war, malaria has greatly increased in Eastern Europe and has spread northward and westward from endemic centres to areas in Russia, Albania, Bulgaria,

Koviloor Acadamy

the Kingdom of the Serbs, Croats and Slovenes, and Greece, wh ch were formerly relatively free of this scourge.

In pursuance of this enquiry a special Sub-Committee—the Malaria Commission—was set up and in 1924 undertook a study tour in the Kingdom of the Serbs, Croatsdan Slovenes, Greece, Bulgaria, Roumania, Russia and Italy. This was followed in 1925 by an investigation of countries around the Mediterranean basin, and the programme further included a number of scientific studies such as the relationship of river deltas to endemic malaria (the Danube, the Ebro, the Po, etc.), the role of animals and of rice fields in the production of malaria in Europe, the results obtained by drainage measures, by other anti-larval measures, by measures directed against adult mosquitoes, the conditions under which mosquitoes become infected, etc. A tour of certain States in the south of the United States will be made in order to study features of the anti-malaria campaign, such as anti-la val measures and Bass's experiments on the exclusive use o quinine, which have a bearing on results obtained from previous investigations in Europe.

Wh n these investigations have been completed, the Commission hopes to be able to give a definite opinion as to the relative value of different anti-malaria measures. At present malariologists are divided into two schools, one believing in sanitary measures tending to destroy the larvæ and adult mosquitoes, while the others consider as of greater importance the distribution of quinine as a prophylactic measure among the inhabitants o. malaria-ridden districts.

The Commission has also been engaged in the study of the world production and price of quinine. In the present state of production it would be of advantage to utilise all the valuable therapeutic qualities of cinchona (the bark from which quinine is extracted), for during the preparation of quinine a certain number of secondary alkaloids, cinchonine for example, are not utilised. Recent investigations

Koviloor Acadamy

make it appear that the therapeutic effect of these alkaloids is by no means negligible, and their utilisation would greatly increase the quantity of the febrifuge available for distribution, at a cost lower than that of quinine. The Commission has decided to conduct clinical tests for comparing the action of both cinchonine and the total extract of cinchona with that of quinine, and, in due time, when sufficient data have been acquired, intends to call a conference to consider the world production of quinine in accordance with the request of the public health administration of the Kingdom of the Serbs, Croats and Slovenes.

The Commission has already been able to some extent to comply with requests for information received from various countries. Thus, the Albanian Government obtained expert assistance in drawing up a plan of anti-malaria campaign in that country, where the disease is endemic and of vital importance from both the health and economic points of view. In addition Albanian medical officers were given training in anti-malaria work through the interchanges held under League auspices.

The Persian Government asked for a sanitary survey of the country, with particular attention to the malaria problem, and this was carried out by an agent despatched by the Health Committee. One of the members of the Malaria Commission worked for some time with the public health administration of the Kingdom of the Serbs, Croats, and Slovenes, thus enabling that country to profit by the experience gained during the Commission's investigation.

The French Government asked that a report should be given on malaria in Corsica, with suggestions for an anti-malaria campaign, and this was done by two members of the Commission. The Health Committee, in forwarding its report to the French Government, suggested that annual or semi-annual reports should be furnished them on the

Koviloor Acadamy

way in which recommendations made in this report were being carried out and the results obtained.

A course of special studies for malariologists have been organised on a common plan in London, Paris, and Hamburg, and are followed by a period of practical work in two or three malaria districts (chosen in France, Corsica, Italy, Palestine, Spain, Kingdom of the Serbs, Croats and Slovenes, etc.)

(e) *Opium and Dangerous Drugs.* — The Health Committee appointed a Joint Sub-Committee with the League Opium Committee for conducting an enquiry into the quantities of opium and other dangerous drugs needed for medical and scientific consumption annually in each country (1).

On the basis of the Sub-Committee's report, the Health Committee recommended that 450 milligrammes of raw opium and 7 milligrammes of cocaine per head of population per year represented the maximum legitimate requirements in these narcotics for countries with a well-developed system of medical assistance. This estimate was accepted by the second International Opium Conference, held in November 1924 at Geneva (1), and served as a basis for its investigation of the problem of traffic in opium and dangerous drugs. The Opium Convention framed at this Conference laid new duties upon the Health Organisation by asking it to undertake the testing of certain preparations which may be withdrawn from the Convention because they are not habit-forming, and of new preparations which should be added because of their habit-forming nature.

(f) *Tuberculosis Enquiry.* — At the request of the Kingdom of the Serbs, Croats and Slovenes, made during the Fifth Assembly, the Health Committee began to collect informa-

(1) For a fuller description of this work, see the pamphlet in this series dealing with humanitarian activities of the League.

Koviloor Acadamy

tion concerning anti-tuberculosis measures and their value as shown by the experience of different countries (a similar appeal had previously been addressed to the Committee by the Anti-Tuberculosis Union).

As the Health Committee did not consider that it was its function to solve clinical or therapeutic problems, it decided to proceed at once to a preliminary study of the decline of tuberculosis mortality in various countries by drawing up a preliminary report on the subject from the point of view of statistics. The report showed that there had been a real decline in a certain number of countries, and it outlined the probable causes. A special commission was thereupon entrusted with the task of continuing the enquiry along the following lines : first a comparative study should be made of the possible relationship between the decline in tuberculosis mortality and the death rate from all causes; secondly, there should beastudy of the possible relationship between tuberculosis prevalence and industrial work, food consumption in general and the use of milk in particular. The Tuberculosis Commission further decided to carry on a statistical study of the cost of the various anti-tuberculosis measures in order to enable the Health Committee to reply to the requests of public health services which propose to complete their anti-tuberculosis equipment, as in the case of the Kingdom of the Serbs, Croats and Slovenes.

The serious problem of tuberculosis among African peoples was taken up by the expert Commission entrusted with the task of studying tuberculosis and sleeping-sickness in Equatorial Africa. In its last report the Commission suggested the interest that would be aroused in the whole of Africa by studies of the dissemination of this scourge, which causes an exceptionally high mortality on its first appearance among races previously free from the disease.

At its fifth session, held in October 1925, the Health Committee took note of a request made by the Union of South

Koviloor Acadamy

Africa through Dr. J. A. Mitchell, its Secretary for Public Health and Chief Health Officer, to undertake an enquiry into tuberculosis among South African native miners. The Committee declared its readiness in principle to co-operate in such an enquiry, which appeared to offer an exceptional practical opportunity for epidemiological enquiry of a most fruitful kind, both in the study of the general problem of tuberculosis and in the study of the methods of producing immunity. Further information was requested from the health authorities of South Africa.

(g) *Public Health Instruction.* — At the request of several Governments the Health Committee formed a Commission of Public Health Instruction in order to gather data that would enable it to recommend methods of instruction that appeared the most capable of bringing about an improvement in public health. The Commission does not propose to criticise the various methods of teaching public health in universities but rather to analyse the different types of instruction and their influence on medical education and the habits of the public. For this purpose members of the Commission have been making personal investigations and studies in a number of European and American countries, and the Commission is arranging and classifying the information thus arranged in order to issue a general report.

(h) *Miscellaneous Enquiries.* — The Health Committee co-operates with the International Labour Office in the study of anthrax and other diseases of industrial importance. At the reques: of the Italian Government, made at the Sixth Assembly, the question of trachoma is being studied by the Committee, since the problem of preventing this disease has a definite international importance. A number of other proposals made by Governments at the Sixth Assembly are being considered by different members of the Health Committee with a view to presenting reports on what action, if

Koviloor Acadamy

any, is possible. Amongst these proposals may be mentioned that of the Czechoslovak Government for an enquiry into different methods of social insurance against disease; that of the Kingdom of the Serbs, Croats and Slovenes for a study of the control of manufacture and distribution of food supplies in the interests of international public health; the request of the Netherlands Government for a study of infant mortality and the hygiene of school children; and investigation of the problem of leishmaniosis in the Mediterranean basin, the prevalence of leprosy and the measures applied to prevent its spread in Latin America, the prevention of measles by new methods of inducing immunity, the study of preventive methods used in the campaign against scarlet fever, the value of different methods of disinfection in the prevention of disease, and so forth.

Koviloor Acadamy

PUBLICATIONS OF THE HEALTH SECTION

(LEAGUE OF NATIONS)

MINUTES OF THE PROVISIONAL HEALTH COMMITTEE

First Session (from August 25th-29th, 1921.) (C. 40. M. 280. 1921. III.) (English and French texts.)	3/6	$ 0.70
Second Session (Paris, from October 20th-22nd, 1921). (C. 471. M. 346. 1921. III.) (English and French texts.)	7/6	$ 1.50
Third Session (Paris, from May 11th-16th, 1922.) (C. 336. M. 217. 1922. III.) (English and French texts.)	2/-	$ 0.40
Fourth Session (Geneva, from August 14th-21st, 1922.) (C. 555. M. 337. 1922. III.) (English and French texts.)	7/6	$ 1.50
Fifth Session (Geneva, from January 8th-13th, 1923). (C. 27. M. 13. 1923. III.)	4/-	$ 1.—
Sixth Session (Paris, from May 26th-June 6th, 1923). (C. 424. M. 187. 1923. III.)	5/-	$ 1.20
Report on the Work of the Sixth Session. (A. 28. 1923. III.)	6d	$ 0.05

MINUTES OF THE HEALTH COMMITTEE

First Session (Geneva, from February 11th-21st, 1924.) (C. 10. M. 7. 1924. III.)	4/6	$ 1.10
Second Session (Paris, from May 7th-10th, 1924.) (C. 213. M. 69. 1924. III.)	1/-	$ 0.25
Third Session (Geneva, from September 29th-October 4th, 1924.) (C. 588. M. 202. 1924. III.)	3/-	$ 0.70
Fourth Session (Geneva, from April 20th-25th, 1925.) (C. 224. M. 80. 1925. III.)	6/-	$ 1.40
Fifth Session (Geneva, from 8th-14th October, 1925.) (C. 647. M. 236. 1925. III.)		$ 0.90

Koviloor Acadamy

Publications of the Health Section

(Continued)

EPIDEMIC COMMISSION

First Annual Report.	out of print.	
Second Annual Report (English and French texts). (C. 563. M. 421. 1922. III.)	3/-	$ 0.60

STATISTICAL HANDBOOKS SERIES

No. 1. The Official Vital Statistics of the Kingdom of the Netherlands. (C. H. 159.)	2/6	$ 0.60
No. 2. The Official Vital Statistics of the Kingdom of Belgium. (C. H. 162.).	2/6	$ 0.60
No. 3. The Official Vital Statistics of England and Wales. (C. H. 270.)	2/6	$ 0.60
No. 4. The Official Vital Statistics of the Kingdom of Spain. (C. H. 271.).	2/6	$ 0.60
No. 5. The Official Vital Statistics of the Austrian Republic. (C. H. 348.).	2/6	$ 0.60

EPIDEMIOLOGICAL INTELLIGENCE

No. 1. Eastern Europe in 1921. (English and French texts.)	1/-	$ 0.25
No. 2. Epidemics in Russia since 1914. Report to the Health Committee of the League of Nations, by Professor L. Tarassevitch (Moscow). Part I.	1/-	$ 0.25
No. 3. Epidemic Situation in Eastern and Central Europe, etc.	1/-	$ 0.25
No. 4. Epidemic Diseases in Eastern and Central Europe. January-June, 1922.	1/-	$ 0.25
No. 5. Epidemics in Russia since 1914. Report to the Health Committee of the League of Nations, by Professor L. Tarassevitch (Moscow). Part II.	1/-	$ 0.25

Koviloor Acadamy

Publications of the Health Section

(Continued)

No. 6. Epidemic Diseases in Eastern and Central Europe. May-December, 1922	1/-	$ 0.25
No. 7. Statistics of Notifiable Diseases in European Countries.	2/-	$ 0.50
No. 8. Statistics of Notifiable Diseases in European Countries, 1923	2/-	$ 0.50
No. 9. Statistics of Notifiable Diseases in European Countries, 1924	3/-	$ 0.80
Report on the International Conference on the Standardisation of Sera and Serological Tests, convened by the Health Committee of the League of Nations and held on December 12th to 14th, 1921, at the British Ministry of Health, London, (French and English texts.) (C. 533. M. 378. 1921. III.)	1/6	$ 0.30
Report on the Second International Conference on the Standardisation of Sera and Serological Tests convened by the Health Committee of the League of Nations and held from November 20th-26th, 1922, at the Pasteur Institute, Paris.	1/-	$ 0.25
Report on Serological Investigations presented to the Second International Conference on the Standardisation of Sera and Serological Tests held at the Pasteur Institute in Paris in November 1922	8/-	$ 2.-
The Work of the Health Organisation of the League, including the Work of the Epidemic Commission. Report of the Second Committee to the Assembly. (A. 74. 1923. III.)	3d.	$ 0.05
Report on the European Health Conference held at Warsaw from March 20th-28th, 1922. . . .	1/6	$ 0.50
Report of the Technical Conference for consideration of certain methods of Biological Standardisation. Edinburgh, from July 19th-21st, 1923.	4d.	$ 0.05
Investigations on the Serodiagnosis of Syphilis. Report of the Technical Laboratory Conference held at Copenhagen, November 19th to December 3rd, 1923. (Two Annexes.) (C. R. M. 5. 1924. III. C. H. 148.)	3/6	$ 0.80

Koviloor Acadamy

Publications of the Health Section

(Continued)

Interim Report on Tuberculosis and Sleeping Sickness in Equatorial Africa, by Andrew Balfour, C. B., C. M. G., M. D. E.. van Campenhout, M. D., Professor Gustave Martin, and A. G. Bagshawe, M. D. being the expert Committee appointed by the Health Committee, League of Nations in 1922. (C. 8. M. 6. 1924. III.).	4/-	$ 1.-
Further Report on Tuberculosis and Sleeping Sickness in Equatorial Africa, by thes ame. (C. H. 281).	2/-	$ 1.50
Rapport d'ensemble relatif à la campagne de vaccination exécutée en Grèce au cours de l'année 1923 par le Dr Aimé Gauthier, médecin principal de l'armée française, délégué de la Commission des épidémies de la Société des Nations. (C. H. 149) (in French only)	1/6	$ 0.40
The Prophylaxis of Diphteria by the determination of susceptibles and their active artificial immunisation in the United States, by Dr. Louis van Boeckel, Director of the Laboratory of the Belgian Public Health Depart.	1/9	$ 0.40

HEALTH ORGANISATION

The Prevalence of Epidemic Disease and Port Health Organisation and Procedure in the Far East. Report presented to the Health Committee of the League of Nations by F. Norman White. (C. H. 130.).	6/-	$ 1.40
Public Health Services in Hungary compiled from "Public Hygiene in Hungary" of Aladar de Fay, Under-Secretary of State, by Alexander de Dobrovits, M. D., Councillor of Section in the Royal Hungarian Central Statistical Office. (C. H. 265.)	1/3	$ 0.30
Organisation of the Public Health Services in Czechoslovakia by Hynek J. Pelc, M. D., D. P. H. (C. H. 268.).	2/6	$ 0.60

Koviloor Acadamy

Publications of the Health Section

(Continued)

Public Health Services in Austria by Dr. Hermann Schroetter. (C. 825. M. 314. 1923.) (C. H. 141.)	1/3	$ 0.30
Public Health Services in Germany, by Dr. Gottfried Frey, Medical Director, Reichsgesundheitsamt, Berlin. (C. 820. M. 309. 1923. III.) (C. H. 140.).	1/3	$ 0.30
Organisation of the Public Health Services in the Kingdom of the Netherlands by Dr. N. M. Josephus Jitta, President of the Health Council. (C. H. 209.).	9d.	$ 0.20
Health Organisation in Denmark. (C. H. / E. F. S. 49.).	8/-	$ 2.-
L'Organisation sanitaire des Pays-Bas. 29 conférences données à l'occasion du voyage d'études organisé par l'Organisation d'hygiène de la Société des Nation, avril-mai 1924. (C. H. / E. P. S. 48.) (in French only)	4/-	$ 1.-
Malaria Commission : Report on its Tour of Investigation in certain European Countries in 1924. (C. H. 273.)	6/9	$ 1.60
Deux rapports sur le paludisme en Asie Mineure, en Syrie et en Palestine présentés par le Dr Ernest Basso (Smyrne) et le Dr E. Bentmann, conseiller médical de Régence. (C. H. 275.)(in French only).	6/9	$ 1.60
L'Hygiène publique dans la population rurale de l'Ukraine par le Dr S. A. Tomiline (Résultats de l'enquête sanitaire et démographique entreprise en 1923 parmi la population rurale de l'Ukraine). (C. H. 279.) (in French only).	1/3	$ 0.30
Organisation of the Public Health Services in Latvia by Dr. H. J. Cazeneuve. (... C. H. 283).	1/9	$ 0.40
Thirty-six conferences given in Japan on the occasion of the interchange study tour organised for medical officers of health from the Tra Eastern Countries by the Health Organisation of the League of Nations, October to December 1925. (C. H. 332.).	5/-	$ 1.20
A memorandum on the epidemiology of cholera by Major A. J. H. Russell, M. A. M. D., D. P. H., I. M. S., Director of Public Health, Madras Presidency, India. 1925. (C. H. 339).	1/3	$ 0.30

Koviloor Acadamy

Publications of the Health Section

(Continued)

Organisation of the Public Health Services in the Kingdom of the Serbs, Croats and Slovenes by Dr. A. Stampar, Head of the Health Section of the Ministry of Public Health at Belgrade. (C. H. 326.)	1/3	$ 0.30
Report of the Second Committee to the Assembly. (A. 70. 1925. III.)	4d.	$ 0.10
Report of the Health Committee to the Sixth Assembly. (A. 15. 1925. III.)	3d.	$ 0.10
Étude épidémiologique sur la « Leishmaniose viscérale » en Espagne, par le professeur C. Pittaluga. (C. H. 368.) (in French only).	9d.	$ 0.20
Le Foyer endémique de choléra de Rostov-sur-le-Don. Étude épidémiologique par le professeur W. Barikine (Moscou) et le Dr H. Cazeneuve (Genève). (C. H. 395.) (in French only).	1/6	$ 0.40

MONTHLY EPIDEMIOLOGICAL REPORT

Annual Subscription (12 Numbers)	10	$ 2.-
Price of each Number.	1/-	$ 0.20

Koviloor Acadamy

THE MONTHLY SUMMARY

OF THE

LEAGUE OF NATIONS

The *Monthly Summary* of the League of Nations is a record of the proceedings of all League meetings, and provides in general form a regular account of League activities. It is published in separate editions in English, French, German, Italian, Spanish and Czech.

	PRICES	
	Annual subscription	Single numbers
Great Britain, Dominions and Colonies.	5 shillings	6d.
United States.	$ 1	10 cts.

For prices in other countries, apply to :
Publication Department, League of Nations, Geneva, Switzerland.

PRINTED BY BERGER-LEVRAULT, NANCY-PARIS-STRASBURG — 1928

Koviloor Acadamy

LEAGUE

OF

NATIONS PAMPHLETS

(Prepared by the Information Section)

The League of Nations : A Survey (*Revised edition*)		1/-
The League of Nations : Constitution and Organisation (*Revised edition*)	6 d.	15 cents.
The Health Organisation of the League of Nations (*Revised edition*).	6 d.	15 cents.
Social and Humanitarian Activities (*Revised edition*)	6 d.	15 cents.
The Permanent Court of International Justice (*Revised ed tion*).	6 d.	15 cents.
Mandates (*Revised edition*).	6 d.	15 cents.
Intellectual Cooperation (*Revised edition*) . . .	6 d.	15 cents.
Political Problems (vol I).	6 d.	15 cents.
Political Problems (vol. II).	6 d.	15 cents.
Protocol for the Pacific Settlement of International Disputes. (Text of Protocol, Assembly Debates, Report).		1 3

IN PREPARATION.

Revised editions of :

The League of Nations : A Survey.
The Economic and Financial Work of the League.
Danzig and the Saar.
Minorities.
Transit and Communications.
The Reduction of Armaments.

PRINTED BY BERGER-LEVRAULT, NANCY-PARIS-STRASBURG — 1928.